

ESTABLISHED IN 1861

# THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

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**Sudden Death.** we just learn, came to Mr. S. Cornell, of Lindsay, Ont., on Saturday, March 7th, while he was out in his garden. Particulars later.

**La Grippe** has been after Rev. W. F. Clarke all winter—perhaps it would be more correct to say that it has had him in its grip all winter. Either way is bad enough. He says he now can sympathize with Friend Newman, who has suffered with la grippe for several years.

**Mr. W. C. R. Kemp**, of Indiana, has sent us a sample of what he calls "the world's best bee-smoker," and which he manufactures. It is well made, has a strong cold blast, and ought to answer every purpose for which it is intended. Later on we expect to give it a personal trial.

**An Average Honey Crop.**—Here is one of Dr. Miller's recent short straws in *Gleanings*:

Please rise and tell what "an average crop" means.

Why, that's easy to explain, Doctor, even without rising. "An average crop" is what the great majority of bee-keepers didn't get last year! Next.

**California Honey in 1893.**—We have received a statement given out by the Southern Pacific Railroad Company in San Francisco, Calif., which contains some figures covering the amount of honey moved by that railroad during 1893, which will no doubt be of interest to bee-keepers not only in that State, but elsewhere as well. Here are the figures representing the number of tons in each instance:

From territory which may be considered tributary to San Francisco.....	223
From territory tributary to San Jose..	91
"    "    "    Stockton..	679
"    "    "    Sacramento	16
"    "    "    Marysville.	5
"    "    "    Los Angeles	1325
"    "    "    Nevada and Utah.....	82
"    "    "    Arizona and New Mexico.....	215

Total number of tons.....2635

In pounds this would be 5,270,000—a very large quantity of sweetness. Nothing small about California—especially when it comes to honey-production!

**The Unusual March Weather** has brought disastrous results, especially in the South where vegetable life was far advanced. One correspondent from the far South writes in an utterly discouraged tone. He says that such a time has never been known before. In that very statement there is some comfort, for there is no probability of the like happening again in his lifetime.

No doubt it is discouraging enough to see all the blossoms killed, and have one's bright prospects all blighted in a night, but things are much as we look at them. Look around and see how it is with others who are worse off. In the North it is not entirely unknown to see the ground covered

with white clover blossoms, only to mock you with their whiteness, without yielding a pound of surplus. Indeed, of late, a good honey year at the North is the exception rather than the rule.

The loss of a single crop isn't anything like so bad as to have your whole apiary rotten with foul brood.

Be thankful you have your bees left in a healthy condition, and that you are not laid up with a broken leg; take good care of your pets; keep a stiff upper lip, and it is possible that even this year, from some unexpected source, the bees may surprise you with a little surplus.

**Here's One on California!**—The following item of "news" was published recently in the New York *Recorder*:

**FOOLING THE THRIFTY BEE.**—Once in St. Paul a \$1.50 a day laborer had lung trouble. He went to Southern California and began keeping bees. Last year he sold \$40,000 worth of honey. Bees do well in Southern California, for flowers bloom in all seasons, and they keep on laying up honey for the winter that never comes. Great joke on the bees, isn't it?

This would do as a "great joke" if it weren't such a *great lie*. The idea of getting \$40,000 out of bees in one season—and a "lung troubled" fellow at that! Gracious, what could a healthy fellow do? We'll have to commend this California yarn to Rambler, seeing it is "rambling" around among the newspapers. But they are two very different kinds of "ramblers," you know!

For a retail market, excellence of honey should be the prime consideration, but the attractiveness of the package should never be lost sight of.—*Newman*.

#### Heddon's Reply to Charges.

Last week we promised to give in this number a reply from Mr. Heddon to Bro. Root's charges of adulteration, which reply was printed in *Gleanings* for April 1st. Here it is:

*Dear Mr. Root:*—As a brother bee-keeper, brother-publisher, and brother-man, standing under the law which certainly should not be more charitable than social and commercial judgment, and being always innocent until proven guilty, I crave space at your hand to make some statements and arguments in reference to the damaging matter which has appeared from time to

time in your journal, culminating in very serious charges implied, although not positively preferred, against me in your last issue.

\* \* \* \* \* You state that "complaints kept coming." I cannot imagine whom they came from, when nineteen-twentieths of my customers praised the honey I shipped them, to the highest standard. I here and now call upon every person who has purchased honey of me during the last two years in question, or at any other time, for that matter, to send to this journal (*Gleanings*) for publication, a statement of their opinion as to its purity and quality, and why that opinion, and what satisfaction said honey gave to their customers, to the best of their knowledge. I send you a list of my bee-keeper customers for 1893 and 1894, which includes nearly every one of them. You will understand that most of my 1893 crop was also sold to the persons named in the list for 1893.

But in the list of 1893 are two names I wish to specially refer to. One is F. Minnich, of North Freedom, Wis. He said my honey was not as good as his own, and didn't give good satisfaction, and then added the following: "You got a terrible blowing up at our State convention, in regard to sugar-honey, which served you just right." Here it will be seen that I lost a customer who discovered inferior quality in my honey because of what Prof. Cook said and wrote, and what Mr. Minnich had been informed, by "reports coming in," was said by me.

The other one is Geo. G. Willard, who was arrested, as you state.

Under date of June 2, 1893, Mr. Willard wrote me as follows, in response to my solicitation for his testimonial: "Some of your honey has given satisfaction, some not. I have had better. Some of the late made honey was strong and poor." Mr. Willard had been one of my best customers, and I was surprised at his response to my solicitation for his testimony. However, on the 5th of the following August he ordered three 60-pound cans, and on the 24th of the same month, five more 60-pound cans; then on the 15th of the following November, 10 cans more, every drop of which was strictly pure, and 13 cans of which have been returned and re-remitted for, less the freight. These 13 cans are now in my honey-house, just as they arrived from Mr. Willard, and the honey is candied solid. This is all I know about the Willard honey.

Now, who is the well-known bee-keeper who purchased two cans of honey, and sent the affidavit? When at the World's Fair last fall I called on Thomas G. Newman, Manager of the Bee-Keepers' Union. While there he showed me two bottles of honey said to be adulterated, and taken from one of my cans. Now, I do not pretend to be able to detect glucose in honey, by any method whatever; but the sample shown by Mr. Newman gave me the impression of being pure basswood honey that had been taken from the hives before it should have been, and very "green," or else had been

watered. You are all aware that no two honeys taste alike. Honey from different blossoms differs much in taste and appearance, and most of you are likely aware of the fact that honey from the same variety of blossoms, in different localities, often not more than 40 miles apart, tastes and often appears very different. Those two samples never came from my apiary, and I afterward gained some evidence that they were sent to Manager Newman by W. D. Soper, of Jackson, Mich., who purchased three cans of me Feb. 13, 1893, of my 1892 crop.

You state that Mr. Willard was fined \$25 and costs—a total of \$64.85. Mr. Willard was adjudged guilty by the court, solely upon the chemical analysis report of Prof. Albert W. Smith. You didn't state this in your editorial, nor did you state the fact that it was upon the evidence of another chemical analysis by this same Prof. Smith that Mr. Jankovsky was damaged in reputation, and by the law of the State of Ohio compelled to pay a heavy tribute to the pockets of officials; but on the previous page you state practically the same things regarding Mr. Jankovsky.

Before closing this article I will state that I have shipped no impure honey to Mr. Willard, nor any other man, during 1893 and 1894. If I had, I would not have received the testimonials I did. When you say that my "utterances on the glucose question give coloring to the statements of the different chemists," you do not compliment the science of chemistry, and yet, in my opinion, you speak logically of the science, but illogically and wrongfully of me. I have never said one word to lend you reason for such statement. Whenever I have written or spoken upon the glucose-honey-mixture question I have in every instance stated that no bee-keeper could afford to adulterate, and I didn't believe bee-keepers were adulterating. I have said that glucose was not poison, nor injurious to the human system; that 50 pounds of it is consumed annually under the name of "golden drips," and other syrups, to every pound of honey eaten. I have also said that, while it might be to our interests to discourage its consumption in all forms, in all of which it is a competitor to our product, to go to complaining of bee-keepers, and making arrests, or doing or publishing anything sensational that will get into and go the rounds of newspapers, will damage us materially. I have said these things, and I say them again, because I believe them true; and, further, I believe that a statement of these truths, if heeded, will be of immense value to our pursuit.

You used the term "cheap honey." I have never sold honey at a price that could be called "cheap," except for an article superior to nearly all of the extracted honey on the market. I inclose you my price-list, which quotes the lowest figures I have ever sold at; and I have a late circular before me, from S. T. Fish & Co., quoting extracted honey at 4½ cents.

Prof. Wiley, of Washington, whom you quote, it must not be forgotten, was for

several years *justly* called a liar, and destroyer of our business, which impeaches his testimony, or else he was for years worse abused than I am at this day by bee-journals.

You state that it seems to be "demanded of you that the bee-keepers of the land be notified of these things." Now, Bro. Root, how do you think my friends and myself, who positively know the truth, couple that statement with the one that you "practice and preach that kind of charity that is kind and suffereth long?" Admitting that you believe the truth of what you have published, even if it *were* true, I should like to hear your explanation of how and what good it will do the bee-keepers of the land to be "notified of these things." I cannot imagine.

If I were told that any prominent bee-keeper who had succeeded in the business, making it buy him \$10,000 worth of other property, besides increasing itself—that this bee-keeper has always paid every debt promptly; that his word was as good as a bank-draft in the commercial world; that he had been honored with the highest office in the gift of the people of his municipality; that he had the intelligence to invent implements and methods that were praised by the brightest of his class; was doing something that was both "foolish" and criminal, I wouldn't believe he was doing it as long as there was a shadow of doubt; and when there was not, I should be compelled to doubt the foolishness and criminality of the act, and be tempted to try it myself; wouldn't you?

But what I am to do? If the science of chemistry is reliable, I can produce nothing but adulterated honey in this locality, and, consequently, must quit the business. If I have wronged you, I have wronged myself more by losing my temper over the inconsistent and damaging paragraphs which have been printed concerning me, all of which I knew were not true, and that may be the reason you complain of my not giving "satisfactory answers." I wish to ask you why you didn't send me advance proofs of this printed matter, and in justice publish this reply in connection therewith.

"Now I have given the facts for just what they are worth, and the reader may draw his own conclusions."

JAMES HEDDON.

To the foregoing from Mr. Heddon, Bros. A. I. and E. R. Root both reply in a long foot-note, which we have not room for in this issue, but will give next week. So far we have refrained from making any comments on this subject, believing our readers are quite able to draw their own conclusions. What we want to do *first*, is to inform our readers of what is going on, so they may be acquainted with the statements of both sides of the case. Of course, all our readers know what a hatred the BEE JOURNAL has for adulterators, and even the very "appearance of evil."





ANSWERED BY

**DR. C. C. MILLER,**

MARENGO, ILL.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 30 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

### Starving with Plenty of Honey.

One of my neighbors called on me this morning, and wanted to know what to do when bees sealed their honey so solid that they could not get to it, stating that some of his colonies had sealed theirs in that way, and were starving. I told him I had never heard of bees starving with a hive full of sealed honey in frames, and to take a sharp knife and uncup it. I further told him that I would find out if the like was ever known before. F. M. L.

Langlois, Oreg., March 9.

ANSWER.—Bees sometimes starve with plenty of honey in the hive, not because they cannot uncup it, but because it is too far from the cluster, and too cold for them to leave the cluster. There's no trouble but what they can uncup it, if it's in the middle of the brood-nest, or if it's warm enough for them to go where it is.

There's only one way in which a starving colony, so far as I know, could have honey right in the brood-nest without getting it, but that's a very rare case, and it is not likely your neighbor's bees were so situated. It sometimes happens that honey sealed over in the comb is so placed in the hive that there is room to add to it. In such case the bees sometimes commence building right over the capping, and when the bees come to use out such honey afterward, I never knew them to get down any deeper than to the old capping. They probably think that's the septum, and they don't dig through the septum.

### Working for Extracted Honey.

1. I wish to run part of my bees for extracted honey. I am using the American hive with a frame 12 inches deep. Is it best to put the extra body on top of the brood-chamber, or will it work just as well, or better, to put the body with the empty frames below the brood-chamber, by taking the one frame with the queen out of the

brood-chamber, and placing it among the empty combs below, the queen to be held below by a queen excluder, then the old brood-chamber on top to be filled with honey as fast as the young bees hatch out? I worked one colony on the last-named plan in 1893, but, in 23 days after, they cast a swarm that nearly filled an American hive. Two days later the swarm was returned, and all worked well. I extracted 137 pounds of honey from the colony, and after the honey-flow was over I divided them into two good colonies, both of which are in good condition to-day.

2. Is it best to leave the entrance for the top body open, or is it better to let them use the lower entrance only? J. S.

Huntington, Ind., March 28.

ANSWERS.—1. Either way will do well. If you can always have as good results as last year, it certainly will be well to follow up the plan. But I should not expect them always to swarm. Be sure to report your success the coming season, and tell how many colonies swarm with the brood put up.

2. There may be a little advantage in having the two entrances.

### Preventing Loss of Out-Apiary Swarms

I read the answer to A. W. S. on page 363. I am using what I call a success in preventing loss of swarms in out-apiaries. My frames are crosswise of the entrance. The division-board has a strip of zinc  $\frac{3}{4}$ -inch wide with one row of holes at the bottom of the board so the bees can pass through. All hives that are full of bees and brood when the honey-flow commences, I set the queen with one or two frames of brood at the back end of the hive, and the division-board in front of them and between the rest of the brood-frames, leaving them all to hatch out and be filled with honey. I also put over them the excluding-board of zinc, and any surplus arrangement for extracting I have. By this method I stop all brood-rearing except on the one or two frames that I have left with the queen behind the division-board. The bees have free access to the queen, both below through the division-board and over through the zinc excluding-board. That is my way for keeping bees at home, and get good work from them. This is the way I leave the brood-frames for extracting.

For comb honey it is a little different in the brood-frames. Leaving the queen with about the same frames behind the division-board, I take out all the brood-frames except 3 or 4 of those nearest solid full of sealed brood, and in the place of the frames taken out I place 3 or 4 broad frames filled with sections, placing them back next to the division-board, and the brood-frames in front, next to the entrance. Most of the brood will be out in 10 days, and then I take them all out, or nearly so as to space, and in place hang more frames of sections. By this method I put all my bees in the field during the honey-flow, and get honey

in place of rearing useless bees. It is a simple method, no traps or useless fixings, and will give me a little honey from a weak colony, or a great deal from a strong one. What do you think about it? J. C. Astor Park, Fla.

ANSWER.—If you have given the plan a thorough trial, and know that it meets the approbation of the bees, that's worth more than any theoretical opinion. Confining the queen on one or two combs is a little in the direction of caging the queen. When I caged queens I was sure to start the bees to rearing queen-cells and swarming, unless the cells were cut out. If I should confine my queens to one or two combs, I should feel pretty sure of swarming. Of course the old queen would not go off, but young queens, all the same, would be reared to make trouble.

Is there no danger of pollen in sections between the queen and the entrance?

#### Foundation Fastener, Wiring Frames.

What foundation fastener would you recommend—The Daisy or Arthur C. Miller's Automatic?

ANSWER.—My assistant, who does that work, likes the Daisy.

Does wiring frames materially strengthen them? Is it necessary if we don't extract? I intend to put in brood-foundation to get straight, all-worker comb. Is this right?

ANSWER.—Yes, I have all frames wired, although I seldom extract. Filling the frames with worker foundation is all right. If the frames are not full, you'll have drone-comb.

Can I put foundation in wired frames with these section foundation fasteners?

ANSWER.—No. You need a little tool made purposely for that, unless you use heat. Hold the frame with the foundation in, wire side down, over a lamp or a stove; then as the wire heats, gently press the foundation on it.

Does sweet clover make good honey for surplus? Where can one get the seed?

ANSWER.—The honey is counted good. The seed is advertised in the BEE JOURNAL.

Would you advise getting outside winter cases for my dovetailed hives? What kind of packing is best?

ANSWER.—Yes, if you don't cellar your bees. Ground cork is perhaps best, if not too expensive. Chaff is also good. Most bee-keepers in New York, I think, prefer the cellar.

Is a starter cut V-shaped better than cut square? Bees cluster V-shaped to build comb.

ANSWER.—I think you will like best to have the full starter, especially if you ship your honey.

**A New Edition** of "The Bee-Keepers' Guide; or Manual of the Apiary," by Prof. A. J. Cook, has just been issued by the publishers of the BEE JOURNAL. Sixteen thousand copies of this excellent and complete bee-work have already been sold, and it is to-day as standard as ever—Plain—Practical—Scientific. It contains over 450 pages, is beautifully printed, neatly and substantially bound in cloth, and is sent postpaid for \$1.25 per copy; or clubbed with the BEE JOURNAL for one year—both for \$1.65.

It will be noticed that the price hereafter will be \$1.25, instead of \$1.00 as heretofore.

**The Farmers' Magazine** is the name of a new agricultural monthly just issued by the Farmers' Magazine Co., of Springfield, Ills. Price, \$2.00 a year. It contains 48 pages, and a beautifully colored cover. Mr. J. S. Hambaugh (brother of our bee-keeper J. M. Hambaugh, we believe) is its editor and manager. The new magazine is a beauty, and of course contains very much of value to every farmer and his family. We bespeak for it great success. Address its publishers for a free sample copy, and learn how you may secure it for the first year at half price.

**"Foul Brood; Its Natural History and Rational Treatment,"** is the title of an interesting booklet by Dr. Wm. R. Howard, of Texas. It also contains a review of the work of others on the same subject. It is being sold at the office of the BEE JOURNAL. Price, postpaid, 25 cents; or clubbed with the BEE JOURNAL for one year—both together for \$1.15. Orders received now.

**Catalogues for 1894** are on our desk from the following:

Mrs. J. N. Heater, Columbus, Nebr.  
L. L. Alsbaugh, Auburn, Nebr.  
J. N. Colwick, Norse, Tex.  
Leahy Mfg. Co., Higginsville, Mo.  
J. B. Mason, Mechanics Falls, Me.  
Plinny Sheppardson, Catlin, Wash.  
F. C. Morrow, Wallaceburg, Ark.  
Wm. H. Bright, Mazeppa, Minn.  
Edwin E. Smith, Watertown, Conn.  
Thomas S. Wallace, Clayton, Ills.

**A Binder** for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for \$1.40.



CONDUCTED BY

MRS. JENNIE ATCHLEY.

BEEVILLE, TEXAS.

### Removing Beeswax or Propolis from Clothing.

MRS. ATCHLEY:—Has anything yet been discovered that will remove spots of beeswax or propolis from clothing? If so, what is it? G. F. T.

Friend T., I do not know of any effectual remedy for removing beeswax from clothing. If any of the readers of the BEE JOURNAL know, will they please tell us through these columns, so that we may all learn?

JENNIE ATCHLEY.

### What Caused the Bees to Die? Etc.

MRS. ATCHLEY:—I wish to know what kind of buildings they put up where you live; if they use much brick and stone, as I am a mason by trade, and I think if I could go there and work awhile at my trade, I would know then whether to sell out here and move or not, as I have taken quite a notion to that country since reading about it.

I have kept bees about a year, and have read with interest the BEE JOURNAL, and especially when you had your class of "infants." I started last spring with four colonies, and divided them once, and have eight now, all in good condition except one, which I found about six weeks ago, with more than half the bees dead in the bottom of the hive. I cleaned out all the dead ones, and since then there are no more dead, and they seem to be all right. What do you suppose was the cause of it?

JOHN T. BROWN.

Sumas, Wash., March 18.

Friend Brown, I will answer your questions as best I can. There are four large buildings now going up in Beeville, and they are using brick and stone. One of the buildings is a \$50,000 college,

and the others are three large business houses. The ring of the mason's trowel and the carpenter's hammer is heard on almost all sides in this little city of 2,500 people; and all are seemingly happy, and still we are reported starving! But such reports do not hurt us, as we know they are not true.

I do not know what caused your bees to die.

I will start another "infant" school soon in this department.

JENNIE ATCHLEY.

### Does it Injure Queens to Cage Them When in Full Laying Condition?

I say no, that it does not injure a queen in the least. I see that Mr. Faylor, on page 371, has had some experience the other way. So now I will relate my own experience along this line.

As I have told you before, how we keep cell-building colonies about 20 in number, 10 of them have queens on the start, and 10 are queenless. We rear a batch of cells in the 10 queenless ones, then take out the 10 queens that occupy the other 10 hives, and introduce them to the 10 queenless ones, just after the cells are removed, and *vice versa*. Well, we have often found it necessary during the season to cage the "cell-building queens," as we call them, and during the summer they are always kept at the top notch of their laying capacity when in the hives. These 10 queens have been caged as many as 20 times, and each time they were at the highest pitch of laying, for if not kept so by natural stores, they are kept fed up, and these 10 queens used last year are being used again this year, and are as prolific today as at this time last year.

Now I deem this (dogmatic) positive enough proof to convince me that it *does not* injure a queen-bee as it does a hen, to check her in egg-laying. The mother-bee just empties her body of eggs, and is at ease, while a hen cannot do so.

Now, for fear that Mr. Faylor may think that I am trying to head him off, I will say that I am not, as he made nothing positive about his third paragraph, and gives nothing to prove that it does hurt queens to suddenly stop laying; and I have positive proof in my own yard that it does not hurt a queen to stop laying, as I have tried it.

I do not like to cage a queen that is full of eggs, and mail her at once. I think we should *always* give her ample time to free herself, which will be about

three or four hours, or as soon as she can after she has been convinced that she sure-enough has to do so.

Another thing I am afraid Mr. F. is misleading in, and that is his dry food for mailing queens. There are extremes both ways. The candy must be soft enough to hold moisture, and not too soft; and never risk a queen a long distance on dry candy. The best candy for me is that which will remain soft and pliable for a long time, and still not daub the bees and queen. If I could so arrange it, I would feed my queens and bees that go through the mails, on pure honey, and no sugar about it, but on account of Uncle Sam's ruling, we are not allowed to send liquid honey through the mails, lest some of us might become careless, and put up some packages that would leak honey and besmear the mail matter, then we would have a row on our hands, and likely have our queens excluded, so that will not do. But to get a candy that will retain moisture as long as possible, is the candy I am on the lookout for. I do not fear mailing queens to any point in the United States or Canada, but across the "big ponds" is the trouble.

Now, Mr. Faylor, if you will get us up a candy that will hold good and mail queens safely for a month to six weeks, I shall for one hollow out "Hurrah! for you."

Now, please do not, Mr. F., think for a moment that I am just starting out to oppose you, but, to the contrary, and I hope we may get you so stirred up that you will give us the best in your shop, as I for one love to read your writings, and I believe you can teach us something good. JENNIE ATCHLEY.

#### Thinks it is Bee-Diarrhea.

MRS. ATCHLEY:—Last fall numbers of colonies of bees were stricken with a disease in which the bees appeared to have fits, or were quite unable to fly, finally wandering away from the hives and dying. I lost nearly half in a few weeks, and now the disease has reappeared in four hives, and I fear will rapidly spread to the others, unless I am able in some way to cure them. Will you kindly tell me what to do?

I hope you are not suffering from the same drouth as we are having in this region.

CLAUDE STERT.

Montell, Tex., March 28.

Friend S., from the best I can make out, your bees have the diarrhea. Salt

has been highly recommended. My bees never were troubled with it much, and none in this county.

Yes, we are now suffering for rain.

Who will tell us how to cure bee-diarrhea?

JENNIE ATCHLEY.



#### The Nucleus Method of Increase.

**Query 919.**—1. What proportion of those who write the answers under "Queries and Replies," practice increase of colonies by the nucleus method?

2. What are its advantages over natural swarming, if any?

3. Do those who own out-apiaries practice the nucleus method, or is there a better way? If so, what is it?—Out West.

1. I don't know. I do not. 2. It has none.—G. M. DOOLITTLE.

1. I don't. 2. None, for me. 3. I don't know.—J. H. LARRABEE.

1. I don't know. 2. I don't know. 3. I prefer natural swarming.—H. D. CUTTING.

1. I do not. 2. The advantages are all disadvantages. 3. Natural swarming is better.—R. L. TAYLOR.

1. I have practiced artificial swarming. 2. No weak swarms. 3. I cannot answer this.—JAS. A. STONE.

1. I don't know, but I do not. 3. I think not many. I believe natural increase is the better way.—A. B. MASON.

1. I don't know. 2. I don't think there are any. 3. I think that natural swarms are best. Let a colony swarm once.—MRS. L. HARRISON.

1. I cannot say. 2. As a rule, more rapid increase. 3. There is no better way to get rapid increase than the nucleus method.—G. L. TINKER.

We do not practice the nucleus method, but prefer, when we want increase, to take enough brood to make a colony without any more tinkering.—P. H. ELWOOD.



1. I do not practice the nucleus plan. 2. None, and the disadvantages are many. 3. The self-hiver is far ahead of any other plan.—C. H. DIBBERN.

1. I don't know, but I suspect a very small per cent., if any. Here's one who doesn't. 2. I don't see any unless there is a sale for bees.—EUGENE SECOR.

1. I don't know. 2. A big advantage is that you needn't watch for swarms. 3. Different methods are practiced, just as in home apiaries.—C. C. MILLER.

1. We do. 2. You rear your queens in the cheapest way, and save quite a great deal of time to the full colonies. 3. We know of no better way.—DADANT & SON.

1. I think very few. 2. They are wanting. Natural swarming pays best. 3. Letting them swarm. This is made safe by keeping an attendant, or using traps.—A. J. COOK.

1. I don't know. I do, to a limited extent. 2. It does away with watching for swarms, and you have better and safer control of your increase. 3. I do.—J. M. HAMBAUGH.

1. I do not know. I use it very little. 2. A skillful man can increase his colonies faster. 3. In out-apiaries I use it to some extent in connection with dequeenings.—J. A. GREEN.

1. Who can tell? I do, for one. 2. With myself, it is much easier to do so, and I find the results fully as good. 3. I don't know what those do who run out-apiaries, but I have yet to learn a "better way."—J. E. POND.

1. I do not know. I do not. But I would, if I desired rapid increase. 2. It has no advantages, only that with empty combs, or comb foundation, there can be more rapid increase. 3. I do not know, but I presume not.—M. MAHIN.

1. If you mean by the nucleus method, dividing or artificial swarming, you may count me one. 2. I have not room here to begin to tell the advantages in this latitude. No more natural swarming for me, as I can beat it in my latitude (Texas).—MRS. JENNIE ATCHLEY.

1. As the "increase of colonies by the nucleus method" is practiced very differently by different apiarists, I can only say that I probably increase one-third of my colonies by artificial swarming. 2. It has no advantages, except when *your time* is limited, and you care not to take risks.—J. P. H. BROWN.

1. Of course, I am unable to answer how many build up nuclei into colonies. I am quite sure, however, that after

riper experience, very few practical bee-keepers now practice the nucleus system to obtain increase. 2. I know of no "advantages" over natural swarming. 3. I don't know. I make nuclei every year, but I use them to take care of surplus combs, when I have them, and unite them in the fall.—G. W. DEMAREE.

1. I don't know. We increase our bees by division of combs and bees, but always make our nuclei full colonies to begin with. 2. It does away with the watching for the issue of swarms. We have now five out-apiaries, and we see them during the swarming season once in eight or ten days—no one to look at them between times.—E. FRANCE.

1. I am not sure what you mean. I give my bees plenty of room at the right time, and then let them have their own way about swarming. I hive all swarms on the old stand, and leave all surplus arrangements with the swarm. 2. If I wanted *bees*, I would divide; but if I wanted *honey* I would let them swarm. 3. I never had any out-apiaries.—EMERSON T. ABBOTT.

1. I can only answer for myself, and say I do. 2. I have only a fall harvest, while there is enough coming in during the summer to build my nuclei up good and strong for the harvest. It enables me also to control increase, and make closer selections of queens. 2. I have no out-apiaries, but if I had, I would surely practice this method to prevent loss from natural swarms leaving.—MRS. J. N. HEATER.

1. I have, when desiring increase without regard to the honey crop. 2. More queens in the forepart of the seasons, though the same object can be attained by letting them swarm naturally, if they will do so early enough, and then divide the natural swarm into as many nuclei as you wish to make from one colony. 3. I never found any better way where increase was the paramount object.—S. I. FREEBORN.

I gave this up as a practice years ago. It has been some advantage, in that it places the bees, and particularly the swarming tendency, more directly under the control of the bee-keeper. It is still practiced quite extensively by queen-breeders. I would caution the experimentalist, however, to never *weaken* a colony for the sake of forming a nucleus—or, I might add, to strengthen another colony. Nuclei should only be formed from over-strong colonies, with a full brood-chamber. Form nuclei at dusk of day.—WILL M. BARNUM.





## In-Breeding in Plants and Animals.

Written for the American Bee Journal  
BY HON. EUGENE SECOR.

On page 220 I find a friendly criticism by Mr. O. P. Miller, of an essay prepared by me for the last annual meeting of our State Horticultural Society.

After carefully reading his letter, I am convinced that about the only difference between us is the meaning of the term "in-breeding."

The proof he cites of wild birds and wild animals mating only with their own kind, I do not attempt to overthrow, but I do not call that in-breeding, unless he attempts to show that birds from the same nest, that is, brothers and sisters, or near relatives, habitually mate for propagating the species, which I do not believe.

The same position is taken regarding all wild animals. I do not believe that near relatives mate, as a rule. I have no positive proof of this, but reason from analogy, which my own observation leads me to endorse, and cite further on, authorities to corroborate my view.

In a breed so well established and so widely known as the Hereford cattle, it is not necessary to breed within the lines of close consanguinity in order to keep the race pure.

Relationship further removed than cousins I had not thought would be regarded as coming within the meaning of the term.

I am a breeder of Short-Horns, and have had a little experience in the practice of in-breeding, which was not favorable. I have also observed the practice in my neighbors, with common cattle, with like results. I have seen forced in-breeding for 10 or 15 years in an isolated poultry-yard, resulting in deteriorated stock. In the human family I have known several cases where cousins married to the evident disadvantage of the offspring.

I do not base my objections to in-breeding alone on the Mosaic law forbidding marriages between near relatives. I believe, however, the prohibition there inculcated is founded on sound physiological principles, which the human race had even then come to acknowledge. Is there a civilized (or uncivilized) nation on the face of the earth that practices it? If so, is it to their mental or physical advantage, or otherwise? The lesson learned from plant life is certainly against it.

Hence I argue that it is contrary to nature, I do not maintain that an occasional *judicious* mating of near relatives, *in order to fix some desirable type*, is not wise, but this does not disprove the general rule; because while it is possible to perpetuate some desirable type by close in-breeding, if not done with some definite result in view, and carried on in an intelligent manner, it may lead to very *undesirable* results. Defects are as likely to be transmitted and intensified by the practice as virtues—perhaps more so.

Where one man can walk a rope over Niagara, ten thousand will fall in. So it is with this dangerous business of trying to improve nature's methods by violating one of its fundamental laws—it requires a "level" head to succeed.

But I wrote the article in question to show that bees were a necessary adjunct to horticulture; that they were created for a wise purpose in connection with the growth, development and perfection of the vegetable kingdom. Experience has taught us that the flowers of certain plants need insect aid to perfect fertilization. What I meant by the benefits of cross-fertilization was, that it was an advantage to the *individual plant* to be fertilized by the pollen of some other individual plant of the *same species*, growing as far as possible from the first, and under different conditions.

My authority for this statement is Charles Darwin, whose eleven years of careful and systematic experiments are in his book entitled "Cross and Self-Fertilization."

To show how nature has provided against incestuous mating of flowers from the same plant, he says:

"Cross-fertilization is sometimes ensured by the sexes being separated, and in a large number of cases by the pollen and stigma of the same flower being matured at different times." Again, "Cross-fertilization is also ensured in many cases by mechanical contrivances of wonderful beauty, preventing the im-

pregnation of flowers by their own pollen." Again, "There is a class in which the ovules absolutely refuse to be fertilized by the pollen from the same plant, but can be fertilized by pollen from any other individual from the same species. There are also very many species which are partially sterile with their own pollen."

He quotes approvingly a German botanist—Sprengel—who wrote as early as 1793: "It appears that nature has not willed that any one flower should be fertilized by its own pollen."

He also quotes Andrew Knight as saying, "Nature intended that a sexual intercourse should take place between neighboring plants of the same species."

Again Darwin says: "With ordinary plants the pollen of another variety, or merely of another individual of the same variety is often strongly prepotent over its own pollen when both are placed at the same time on the same stigma."

In summing up his conclusions, among other things he says: "It has been shown in the present volume that the offspring from the union of two distinct individuals, especially if their progenitors have been subjected to very different conditions, have an immense advantage in height, weight, constitutional vigor and fertility over the self-fertilized offspring from one of the same parents."

"The effects of the close inter-breeding on animals, judging again from plants, would be deterioration in general vigor, including fertility, with no necessary loss of excellence of form; and this seems to be the usual result."

The limits of this article will not admit of further quotations. If I am wrong in my views of the subject under discussion, I must be content with so distinguished company.

Forest City, Iowa.

## Taking Bees Out of a Repository, Etc.

Written for the American Bee Journal

BY M. M. BALDRIDGE.

My bees were put into the house-cellar last fall on Nov. 15th, and taken out this spring on March 3rd. Had I been at home I should have taken them out the last day of February, or first day of March, as both days were warm enough for the bees to fly in safety—being over 50° in the shade.

Last year I put out my bees on March 10th, that being the first warm day we had in March.

I put 28 colonies into the cellar last fall, and took out 27 live ones this spring, all, on an average, being apparently in very good condition—combs bright and free from mold and moisture. One colony I found dead, died from starvation.

Since the bees were put out-doors, there have been several good, warm days for them to fly, and they began to carry in pollen yesterday—very early for this region. To-day (March 16th) they are bringing home considerable pollen, and from soft maple, I judge.

The temperature out-doors, the day the bees were put out, was about 60° in the shade, and in the cellar 54°. The temperature in the cellar throughout the winter ranged from 44° to 55°. At both extremes the bees seemed to be quiet and in normal condition.

Owing to drouth last year after the first of August, and the want of honey to gather, my bees quit breeding very early, except a few that I fed considerably. This caused them to go into winter quarters with too many old bees, and too few young ones, and, in consequence, I found more dead bees thrown and carried out of hives in the repository than in former winters. What the result may be I cannot yet say, as I make it a rule, of late years, not to disturb the combs or overhaul the bees until they have been out-doors a month or more. This is to avoid losing queens by the "balling" process.

In my opinion bees "ball" the queen mainly because she takes fright and runs. This she is not so apt to do when filled with eggs.

### THE "SIMPLICITY" FRAME.

Dr. Miller states, on page 329, that the standard Langstroth frame is 9½ x 17½ inches, but to accommodate the use of the one-pound sections, the frame was made ¼ inch shorter, and is known as the "Simplicity" frame.

The Doctor is correct as to the proper length of the standard Langstroth frame, but wrong about the Simplicity. Instead of being ¼ inch shorter, it is that much longer, or 17½ inches. A. I. Root must be credited with having made the change, though he seems to think he did not. If I mistake not, he claims that he sent to Father Langstroth for a sample hive, and that he found it provided with frames exactly 17½ inches in length. I have always thought that he simply "forgot" and that he made the change, and for the reason given by Dr. Miller.

St. Charles, Ills.

## Foul Brood—Reply to Criticisms.

Written for the American Bee Journal

BY WM. McEVoy.

In the AMERICAN BEE JOURNAL for March 1, 1894, page 271, I read an article from Mr. Samuel Simmins, of Seaford, England, on his experience with foul brood. Mr. Simmins doesn't agree with me on some points in curing foul brood, and gives his reasons so fairly and so nicely that I am in duty bound to thank him for his very honest and candid article from start to finish.

Come, now, Mr. Simmins, let you and me reason together, as I do believe we can agree when I explain all the points. First, you say:

"During the course of my experience I hived several renovated colonies upon frames that had been thoroughly scraped and scalded after destroying the diseased combs, but in each case the trouble appeared again. The same occurred with hives so used again, and thereafter each colony (after two days' confinement) was started in a new or disinfected hive, and the disease did not appear again. It may be that in my earlier operations with the disease it reappeared through some oversight of my own, for in the face of the mass of evidence brought forward by Mr. McEvoy, I am not prepared to say that the same hives cannot be used again without disinfection. The whole matter may resolve itself into a question of how long the microbes can exist after being deprived of their natural element, and I must await further personal experience along this line before deciding for or against the plan."

When you were removing the foul brood combs from your bees, they took a good deal of the diseased honey from them, and when you put the bees on the scalded frames they stored part of the foul honey just as soon as they built some combs. *Then as soon as there was larva in the new combs it was fed some of the diseased honey.*

Second, you say: "I have never found the partial starvation plan the least detriment to the bees, and it must cause less wear and tear to vital energy than the original process of Mr. McEvoy, which means rather more labor, in twice shaking the colony from the combs. I should want a job of this kind cleared right away at one operation, without going over the ground the second time."

Now, Friend Simmins, I can agree with you that the two days' confinement (what you call a "partial starvation plan") could not be any detriment to the bees, because bees filled with honey

could not really starve in such a short time as that. You confine your bees two days, and then put them to work; I put the bees to work for four days drawing out comb foundation starters, and get them to store the deadly honey in them. In the fourth evening I remove the new combs (that the bees made out of the starters), so as to get away the diseased honey that the bees stored in them, and give full sheets of comb foundation. I can't see as there is much difference between us, as far as the labor is concerned, seeing that you have to attend to your bees after you had them confined for two days.

You say, Mr. Simmins, that you would want a job of this kind cleared right away at one operation. So would I, and in many cases it can be done, while in others it cannot; everything depends upon how badly the colonies are diseased, and the nature of the honey-flow at the time of curing. I have, during honey-flows, found several whole apiaries with a lot of *unsealed honey stored in diseased cells where foul brood had dried down*, when the combs were removing from colonies in such a horrid state as that the bees would rush into the *unsealed honey* in the foul cells and gorge themselves that full of the deadly stores that they would be fairly padded out with the amount they would so readily get without any uncapping. To put bees so full of deadly honey, in confinement for two days, and then start them to work, would end in a failure, because the bees would have enough honey left in them at the end of the two days to store a little of it as soon as they had some comb made, which they would soon make if the honey-flow was good at the time.

My experience is, that by removing the diseased combs in the honey season, and giving the bees comb foundation starters for four days to work out and store the diseased honey in, and then remove them the fourth evening for full sheets of foundation, which cures every time in the same old hives without disinfecting the hives in any way.

This method of giving the bees starters for four days, and then removing them for foundation, originated with me. I studied out this plan for getting away the diseased honey, and I claim that it is by far the best method in the world for curing foul brood.

Mr. D. A. Jones, of Beeton, Ont., had a very bitter experience with foul brood in his apiaries. Mr. Jones and his men gave the drugs a very thorough trial, and found them a complete failure. His



colonies were so bad with foul brood that he failed to cure them by putting them on starters, foundation, or giving them a partial starvation before he gave them foundation. At last he resorted to almost starving the bees to death before putting them on foundation, and then succeeded in curing. After that Mr. Jones became an advocate of a thorough starvation of the bees before putting them on foundation.

Where colonies are not bad with foul brood, and there is little or no *unsealed* honey in the brood-combs, they can be cured at once by removing the diseased combs and giving them full sheets of comb foundation. I don't remember ever finding one foul-broody apiary in all my experience where *every colony could be cured by putting the bees on foundation at once in the time of a honey-flow*. If all the hundreds of hives that I have handled in my time, that once had foul brood in, had been boiled or scalded, what a lot of valuable wood would have been burned, time wasted, and much curing delayed through time taken up in boiling and fussing with empty hives, at a busy season when work of all kinds was pressing. But the worst of all would have been—the most of this sort of work would have fallen on the women, the ones least able to bear it.

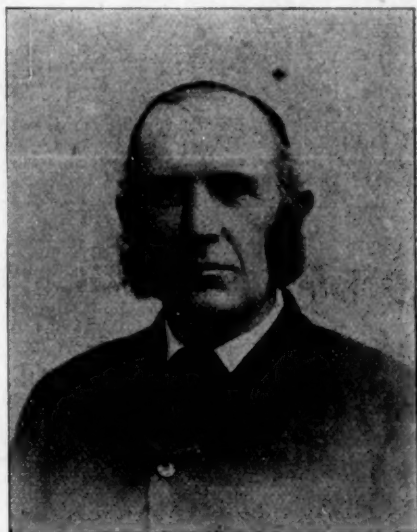
*I knew that the empty hives that foul brood had been in, never did give the disease, and could not cause it.* Knowing all this, I thought it would be a very unjust thing in me not to warn against the boiling of hives as a waste of time.

#### REPLY TO MR. GRADEN'S CRITICISMS.

In the AMERICAN BEE JOURNAL for Jan. 11, 1894, page 51, I read a long article from Mr. Randolph Graden, of Taylor Centre, Mich. Mr. Graden says he has "evidence which proves beyond a doubt that bees in robbing a foul-broody colony do not carry the disease to their hives in honey." Mr. Graden is very much mistaken in supposing that bees can rob a foul-broody colony of its honey and not carry the disease home to their own hives in the honey. Dr. Howard's test cases will forever settle this question about the honey in foul-broody colonies not being diseased. Dr. Howard uncapped the sealed honey in combs I sent him, and with the microscope he examined the honey that he dipped out of the cells without disturbing the cell walls, and found the spores of foul brood suspended in the cells of honey that were sealed.

If I am to judge by all the letters and postal cards that I have received from the best bee-keepers of Ontario, since Dr. Howard's article appeared in the AMERICAN and CANADIAN BEE JOURNALS, I should say that nearly all the bee-keepers are convinced now that the honey in foul-broody hives is *badly diseased*.

Mr. Graden doesn't believe that foul brood is spread in any apiary by robber-bees, and tries to show that the disease is spread about from one colony to another in and by the winds, and says "that it depends entirely upon what kind of weather we have, when the dis-



Mr. Wm. McEvoy, Woodburn, Ont.

ease is in the apiary, as the odor, which is nothing more than small particles of the substance from which it arises, which is driven out of the hive by the bees fanning at the entrance, it simply floats around, and woe be to the hive or colony that chances to be in its way."

Now, my dear boy, you will pardon me when I tell you that you are very much mistaken; because, if your theory was a fact, no apiary in the world could ever be cured of foul brood, when it once got a fair start in it. Come now, Mr. Graden, "hold your horses" until I explain this a little:

If the air in foul-broody colonies was so full of foul germs that the bees could



fan them out of the foul colonies in such quantities as to form clouds to float about an apiary and enter the sound colonies and disease them, why is it that your foul germs don't attack all the larvae in the foul colonies at once, and kill it all before the bees fanned these foul germs out of the diseased colonies in such abundance as to form clouds of them to float about a bee-yard and enter

From Dr. Howard's Book.—Mag. 600 diam.



a, spores of bacillus alvei; b, c, different forms and stages of growth of the bacillus, as found in the active stage of the disease; d, penicillium glaucum, common mold found everywhere—it has covered every specimen of foul brood combs when laid away for awhile; e, sarcina ventriculi often found in the rotten, ropy mass of foul brood; f, micrococci, undetermined putrefactive forms, found in all dead brood and decaying matter—air germs.

other colonies? If your theory was correct, every larva in a foul colony would have the disease when a foul-broody colony got in such a state with the disease that the bees could fan the germs out at the entrance!

Every bee-keeper in the world that has ever had any experience with foul brood knows that there is always some sound larva in foul-broody colonies in the breeding season, until the foul colonies are almost dead from the disease. I cannot spare the time to go to Michigan and treat a foul-brood colony by my methods of curing foul brood, but I will, in June, put a very foul-broody colony in charge of Mr. Gemmill and Prof. Mackenzie to cure by my methods, in the same old hive, without having the old hive disinfected in any way. So Mr. Graden can send his \$100 to Mr. Emigh, of Holbrook, Ont., to hold, and I will put up my money as soon as his is up.

I will also furnish a hive filled with foul brood combs with honey in, and have them placed a few rods from a sound colony, and then set the sound

colony to rob the foul combs of the diseased, on a wager of \$100 that the sound colony gets foul brood from them. I will place this test case in the hands of Prof. Mackenzie and Mr. Gemmill. Mr. Graden can "put up" on this also—half of all the "stakes" to go to Father Langstroth.

I have found hundreds of colonies so rotten with foul brood that the stench from them in hot weather was many times almost unbearable, and several times it was. Many of these combs were very old—a class that make very little wax. I often said if such combs were mine, that as soon as I took them from the bees in the evenings and gave them the starters, I would pile up such horrible combs and burn them, before I would make wax out of such stuff; not but the wax would be all right.

Where there is only a little of the disease in many colonies, and most of the brood is sound, I would in the evenings

From Dr. Howard's Book.—Mag. 600 diam.



a, some of the forms of pollen grains found in the stomach of dead brood; b, the most common form found in dead brood from whatever cause. I have found this form in all specimens of dead brood from Texas, Iowa, Ohio, Pennsylvania, Indiana and Canada. The outer case is thin, ribbed and opens at one end when numerous smaller atoms similar in shape are released often apparently adherent to the parent cell. On examining bee-bread from each specimen this same pollen grain is found with many forms; c, d, the hairs of the bee magnified, often found in honey and in the foul brood masses of sealed brood.

in the honey season remove the brood from the *strongest colonies* and give them starters. I would then cage the queens in the weakest colonies, and then tier up on them the brood I took from the strongest colonies, and leave it there for eight or ten days. I would then remove all the combs and give the bees starters, and let the queens out of the cages, and either make wax of these combs, or

burn them at once. I would remove the starters from *every* colony at the end of four days, and give every colony full sheets of foundation. Do all work in the evenings, and either make wax of all the new combs made out of the starters during the four days, or burn them as soon as they are taken from the bees, then the cure will be complete.

Mr. Simmins has given his method of cure that will cure in many cases; I have given mine that will cure in all cases; and now I do think that Mr. Graden should publish his methods of cure before he writes any more on foul brood, as he has not yet published a cure that would help any one.

Woodburn, Ont., Canada, March 29.

### How the Bees Were Moved.

Written for the American Bee Journal

BY C. H. COLEMAN.

Please permit me to return my thanks to those who, in answer to my question on page 249, have offered so many valuable suggestions on the "moving of bees."

I moved my bees to this place the last days of February, and, I am glad to say, without any perceptible loss in any way. Without going into detail, I will briefly state how I did it, hoping some brother bee-keeper may profit by my experience:

1st. I took the top stories off.

2nd. Having prepared boards the exact size of my hives, beforehand, with strips on them as if I were going to use them for bottom-boards (but instead of using strips  $\frac{3}{8}$  inch thick I used them one inch). I lifted a brood-chamber off the old stand, and placed it on the board thus prepared.

3rd. I tacked wire-cloth over the entrance, which you perceive was one inch instead of  $\frac{3}{8}$  inch, as on the stand.

4th. I placed pieces of quilts, old rags, etc., on top of the frames, thick enough so that when the cover was put on, it would press upon the frames before coming down on the sides of the hive (the object of this was to hold the frames from moving about).

5th. Instead of covering the hive thus prepared with the cover, I placed a board prepared as the first board, on top of the first hive, strips up, ready to receive another hive.

6th. A second hive was placed on this board, and in all respects treated as the first.

7th. A third hive was placed on the second, and treated as before, except it was covered with a plank or board without the strips.

8th. Having a tier of hives, boards, etc., three deep, I nailed strips the length of the depth of the three hives thus tiered up, on the sides and ends of the boards first prepared (and which acted as bottom-boards and covers), and the crate thus prepared was ready to load into the wagon, and following suit with the remainder of the colonies, I soon had them all crated and ready to ship.

I then loaded them in a wagon, on hay, in the most convenient way I could, taking care to have all entrances clear. I don't think the plan can be surpassed in any way, judging from my success in moving them 30 miles over a very rough road.

I am an amateur bee-keeper, having been in the business only two years, but my success so far has been very flattering. I commenced in the spring of 1892 with two colonies in box-hives, and put 17 into winter quarters the past winter, which are all alive and in fine condition for a good crop of honey this year—if we should be blessed with a good honey season.

East Cumberland Gap, Tenn.

### Cause of Failure in Wintering Bees.

Written for the American Bee Journal

BY B. TAYLOR.

What is the reason that in some seasons nearly every one succeeds in wintering bees with but little loss, with almost any kind of quarters and preparations?

What is the reason that in other seasons, like that of 1892-93, nearly every one, regardless of their skill and care, and the most carefully prepared quarters, lose heavily?

There is a sufficient cause for every result—there must be one for this remarkable difference in the results of wintering in different years under seemingly like conditions. What is the cause? It is of very great importance to know, for on safe, successful wintering every hope of profitable bee-keeping is centered.

After careful study of the conditions existing, and the results following them for the last two seasons, I have become convinced that the cause lies in the conditions of the honey-flows in the years

previous to such failures or successes, and that no skill of preparation or perfection of quarters will avail when certain fundamental conditions are lacking.

I believe these general failures and successes are due to the fact that in the years of successful wintering, the previous year had been one of long continued honey-flow, and that in consequence breeding was continued late, and the colonies went into winter quarters with an abundance of *young bees*, which could live until flowers came, and work and breeding could commence again; while in the years of bad wintering there was a failure in the previous fall flow of nectar, that breeding ceased in consequence early, and the colonies commenced their long confinement with mostly old bees that could not, in the very nature of bee-life, live until another spring, however abundant the stores and perfect the quarters; that the few that did live over could not live until new workers could be reared, and that explained the cause of the spring dwindling that is quite sure to follow bad wintering.

Now please do not understand me as believing that good stores and good winter quarters are not important, for I know that bees must have such quarters to be safe, with ever so plenty of young bees. What my present idea is, is that with mostly old bees we can never be safe in wintering, whatever our care; that to be safe, we must in years that the honey-flow ends with basswood, feed the bees a little, judiciously, and keep up brood-rearing and young bees to begin wintering with.

The fall of 1893 was a failure here, as to a honey-flow; breeding ceased early, and my bees went into winter under all the adverse conditions I have named, and I have never been free from apprehension in regard to the result. I now have my wintering cellar in nearer perfect condition to meet all emergencies than anything I ever saw. Last fall I built a brick vault in it, 4 feet square, and reaching to the ceiling. This vault has a door opening into it from the ante-room, so fires can be made without opening the apartments in which the bees are, or disturbing them in the least. In the center of the vault stands a small hard-coal stove, and I can raise the temperature to 80° at any time I wish in the bee-rooms. Without fire, the mercury stands at 38°, and once a week I make a fire and raise the temperature to 60°, and contrary to expectations, the bees are not disturbed in

the least, and they have remained more quiet than any bees I ever wintered.

There are many small holes in the brick vault at the bottom, opening into the bee-rooms, and when the fire is built in the stove, there is a strong draft through the holes in the bottom of the vault from the bee-rooms, and the air is pure enough for a living room for a healthy person, and I sweep all bees from the cemented floor often. I have just swept them out to-day (Feb. 20th), and there is more than I could wish.

There have been no restless bees crawling about the hives or cellar this winter. The hives are without bottom-boards, so all dead bees drop at once to the floor. When I raise a hive-cover the bees are lively, the hives dry, and the combs without a speck of mold, showing every condition of health and contentment to be present, and yet more bees are dying than is pleasant to contemplate. They seem to fall down without a struggle, as if they were old bees that had died a natural death, and such I believe to be the fact.

I am watching the outcome of this winter with an interest I never felt before, for I expect to prove two important things by it—one is, that if the colonies die this winter, I will know that it was from causes that existed before the bees were put into the cellar; and the other is, as to the possibility of successfully starting breeding in the cellar early in March. I shall raise the temperature to near 60°, and keep it there, and when the hives are placed on the summer stands I will place one of my new feeders on each hive, and cover the hive with 8 inches of dry sawdust, and feed enough so that brood-rearing need never be checked, whatever the weather; and when the result of all this care is ascertained, the bee-keeping friends shall know what it is.

Now I know that readers of this will say, "This is nothing new; we have been told many times before that young bees were best for wintering." But, friends, who has yet made any effort, by carefully conducted experiments, to really *know* what degree of truth there was in this theory? Josh Billings said, "It is no use to know so much unless what we know is so." I now propose to *know* just the part the age of the bees, and the conditions that surrounded the colonies in the fall previous to housing, play in successful wintering, and shall not relax my efforts until I can say I know, rather than tell what I believe, or what some one has said.

## BEES IN THE HOUSE-APIARY.

But the house-apiary—how are the bees wintering in that? Well, in the house, early in the fall, on the first approach of cold nights, we can and do in the house, easily and quickly, pack the hives in a warm bed of sawdust, where cool nights and days have no effect on them; and it goes without saying, that breeding will be kept up later here than in the out-yard where the hives are unprotected from changes of weather; and if a little feeding is judiciously done, we can control late breeding at pleasure; and with my new feeder, that gives the syrup directly to the bees in the brood-nest, the feeding can be done so easily and quickly that all burden is removed, for I can feed 24 colonies in five minutes at any time, without any possible danger from robber-bees.

Of course I cannot see into the hive in the packing, in the house, to report their actual condition, but they have had one good flight since winter began, and are tucked away undisturbed in their warm bed; with opportunity for exercise whenever the weather is warm enough to invite them to do so, they must of necessity winter well, and come out in a healthy condition.

And then in the spring, when the bees begin to bring in pollen, I shall feed a little each evening, and brood-rearing once commenced, will never be allowed to lag. And when the white honey season comes, there will be giant colonies ready to collect it, and then, with plenty of supers filled with sections of worked-out combs, on which the "comb leveler" has been used—I did get last year, and will this year, a great crop of the finest gilt-edged honey, if the flowers yield nectar.

The house-apiary is here to stay, and I am going to end my long apiarian experience in introducing it, and making it a success.

Forestville, Minn., Feb. 20.

### Directions for Transferring Bees.

*Written for the American Bee Journal*

BY M. W. LAIRD.

I will try and give my latest method of transferring, for the beginner, as I recently promised to do.

We will assume that the hive or hives have been prepared, containing frames of drawn combs or of comb-foundation. A few drawn or natural combs are best,

when transferring by the drumming process, as bees are not as well prepared for comb-building as when swarming.

Get a piece of soft wood 2 inches square by  $3\frac{1}{2}$  or 4 inches long; trim it down in the shape of a cone, and nail a board 4 inches square on the bottom; take common screen wire, making as many wire cones over the cone block, as you have colonies in box-hives to transfer.

Prepare a small hiving-box about 8 inches deep, the same width as the box-hives—I prefer it about 20 inches long, so that I may better see the bees when drumming them up.

Now you are ready for business, but I prefer to let the bees cast their first swarm, moving the box-hive back 4 or 5 feet, and placing the swarm just hived in its stead.

Light the smoker, put on a bee-veil and gloves, if you use them. Give the old colony a few puffs of smoke, having a bottom-board ready, providing the old hive is bottomless. Turn it upside down carefully, give a little more smoke, if necessary, bore a  $1\frac{1}{2}$  or 2 inch auger-hole in front close to the bottom, tack the bottom-board on, and also one of the wire screen cones over the auger-hole; make the old hive bee-tight, except the exit through the cone, which should be  $\frac{3}{4}$  or  $\frac{1}{2}$  inch in diameter, placing it on top of other hive, or close by the side, both entrances the same.

Your work is done without any drumming or fussing with the bees.

In about 28 days take the old hive to some close room, pry it apart, remove all comb and honey, unmolested by bees, rendering up the combs, and doing as you see fit with the honey.

Should you prefer two colonies, place the first swarm on the new location, letting the old colony remain for about 18 days. Probably it will swarm again in 10 or 12 days. If it should, treat as above described, and you will have two good colonies; or by placing the second swarm in a new location, and in 18 days from the first swarm, you may transfer by drumming  $\frac{3}{4}$  of the bees and the queen up into the hiving-box, and placing a new hive on the box-hive stand, shaking the bees on a sheet spread in front, and watching closely to be sure the queen is present and enters the hive. If you do not discover her, look inside the new hive. If you still do not find her, drum out a few more bees from the old hive, and again shaking the bees a little ways from the entrance will give



the novice a better chance to see the queen enter. If you still fail, drum until you get her, for to make a success she must be in the hive.

I believe that I can almost always tell when the queen enters the hiving-box, by the actions of the bees, but I will not try to describe that part at present.

Assuming that you have the bees and queen in the new hive without much trouble, prepare the old hive with a wire cone and bottom, as before described. I generally wrap  $\frac{3}{4}$  of the wire cone at the base with green grass, leaves, or a cloth, as sometimes the bees will cluster there, seeming to annoy those in the hive, and failing to accept the other hive as soon as they should.

To make it still plainer, I will give records of two colonies that I transferred last season, calling the first No. 1, that cast two fair swarms; the second, No. 2, one good swarm. No. 1 swarmed June 16th, and cast a second swarm June 26th; transferred on July 5th, by drumming the bees and queen, as before described; removed the box-hive, and cut out all comb and honey on July 5th, 1893. There was no live or dead brood, nor a live bee in the hive.

No. 2 cast a swarm on June 17th; transferred on July 5th, by the same process; on July 14 I removed the box-hive, which had about one dozen live bees, no brood and no moth-worms in, either. You see I got three colonies from No. 1, and two from No. 2; but I would not advise the novice to make three colonies.

Millford, Ill.

## CONVENTION DIRECTORY.

### Time and place of meeting.

1894.

Apr. 23.—Venango Co., at Franklin, Pa.  
C. S. Pizer, Sec., Franklin, Pa.

May 3.—Connecticut, at Hartford, Conn.  
Mrs. W. E. Riley, Sec., Waterbury, Conn.

**IN** order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

### North American Bee-Keepers' Association

PRES.—Hemerson T. Abbott....St. Joseph, Mo.  
VICE-PRES.—O. L. Hershiser....Buffalo, N. Y.  
SECRETARY.—Frank Benton, Washington, D. C.  
TREASURER.—George W. York....Chicago, Ills.

### National Bee-Keepers' Union.

PRESIDENT.—Hon. R. L. Taylor..Lapeer, Mich.  
GEN'L MANAGER.—T. G. Newman, Chicago, Ill.  
147 South Western Avenue.



**Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.**

### Fighting and Gentle Bees.

I think that Mrs. Atchley will not have to look any further than the Carniolans for what she demands—prolificness, gentleness, and honey-gathering qualities. I have had blacks and pure Italians that would nearly drive me away from the hives when they were nearly smoked to death, and were the worst robbers that I had, and still they gave no more honey than gentler bees that were willing to mind their own business. I have had queens, both fighting and gentle, from most of the prominent breeders, but have never seen Italian bees but what were as willing to rob as to go to the fields for honey, while the Carniolans mind their own business. I have never seen a colony of Carniolans attempt to rob, nor have I known one to be robbed out, and still they are as good honey-gatherers as I have ever seen; while they are so gentle that I have never been stung by one of them, and I have never used a smoker nor veil in handling them.

FERD M. BOWDISH.

Stockbridge, Mich.

### Grasshoppers and Dry Weather, Etc.

Last year was a poor one in our neighborhood. I sowed five acres of buckwheat, and had a fine stand, but grasshoppers destroyed it all. Grasshoppers and dry weather ruined our entire honey harvest. All the honey we had was from smartweed and Spanish-needle. I had to feed most of my bees for winter, and they are in fine condition now. I kept them in a frost-proof cellar until March 1st, when I put them on the summer stands, with no loss, for which I thank the BEE JOURNAL, for without the BEE JOURNAL I probably would have failed.

I also got a fine tested queen which I am well pleased with. I have bred some fine bees from her. My neighbors call them "yellow jackets"—they are too yellow to be honest—they steal like rats, but they are the best honey-gatherers I have on the place. I am bound to breed more "yellow jackets."

We are having a terrible mess of spring. For awhile we had summer heat; the bees were breeding finely, gathering honey and pollen, but on the morning of March 25th it was down to 16 degrees above zero; on the

26th, in the morning, it was down to 14 degrees above zero on the south side of the house, where the wind did not strike. Everything looks black—raddishes, peas, onions and lettuce are all destroyed; also lots of potatoes will have to be replanted. Oats is gone, wheat is hurt more or less, and fruit is mostly all gone. Where are the blossoms for the bees to gather honey and pollen from? I think we bee-keepers will have to go down into our pockets and get our profit, and give it to our merchants for sweets to feed our pets.

GEORGE F. YOOS.

Central City, Ill., March 29.

#### The Prospects are Good.

The honey crop was almost a total failure with me last season. Bees are in good condition, and the prospects are good.

M. S. PATTERSON.

Grand Junction, Colo., March 27.

#### Perished in the Chilly Winds.

My bees wintered well, but thousands perished in the chilly winds as they went out in quest of water during the last few days. The sun shone brightly most of the time, which induced them out, but the wind chilled them before they got back.

A. H. SNOWBERGER.

Huntington, Ind., March 2.

#### Cold Weather—Hopes for the Best.

March, for the greater part, has been very warm, and bees gathered pollen in abundance, and began breeding rapidly, but for the last week it has been cold—some days extremely so. The mercury was, on one morning, only 14 degrees above zero. I fear much loss. The pollen-bearing buds are all killed. It snowed to the depth of about 4 inches during last night. I am trying to hope for the best.

REV. S. L. CRAIG.

Oakland, Iowa, March 29.

#### Good Prospects for a Honey Crop.

Bees are gathering some honey at present here, though they have had a hard time of it. Last year was the poorest honey season we have had for 15 years. Black bees in this county are about all dead. Italians and hybrids gathered about enough honey to pull through on. The prospects for a honey crop this year are good. Horsemint is up, and there are great quantities of it, so if we can have plenty of rain in May, it will yield lots of honey. I never saw it fail if we have a wet May.

Post-oak, black-jack, box-elder, and tin-oak are in full bloom now, and the bees are getting some honey from them. Yon-pon will be in bloom in a few days, and it is a good honey-yielder. Rattan will reach us in about three weeks, and is a splendid honey-plant. The fruit crop here is dam-

aged considerably by the late cold weather. Corn, that was up on the low lands, is all killed, and on the uplands it was bitten down, though it is coming out nicely, and will soon be ready to plow.

I hope Mrs. Atchley's bees are doing well. I passed through Beeville about a year ago, and fell in love with that beautiful country. I inquired about bees, and was told it was the best part of Texas for bees. I think I will move my bees to that county some day—probably next year. Game is said to be plentiful there, and I am a great lover of hunting. Large game is getting very scarce here, such as turkey and deer.

What has become of Mr. Aten?

W. S. DOUGLASS.

Lexington, Tex., April 2.

#### Two Kinds of Tongue.

In speaking of the honey-gathering qualities of the gentle Italians, Mrs. Atchley thinks they are "not in it" when compared with the vicious hybrids, and says: "The bees that represent the man sitting on a street corner whittling a dry-goods box, are not the bees for me." Now, really Mrs. A., do you want me to think that the bees that represent the industrious woman with a tongue and temper that continually keep a fellow in hot water, are the bees for me?

Belle Vernon, Pa.

A. B. BAIRD.

#### Bees Did Poorly Last Year.

I did not send my dollar to the Bee-Keepers' Union this year, from the fact that bees have done so poorly in this section in 1893. From the last of August until frost it was a continual drouth, consequently no honey, and nothing but old bees to go into winter quarters. They have expectedly been "handing in their checks" this spring, one by one—from 65 colonies they have got down to 27. In 1892 I reported one colony storing 120 pounds of surplus honey; now that hive has not a live bee in it.

B. F. FEAZEL.

Washburn, Ills., March 29.

#### A Whole "Peck" of Success.

We are having a regular blizzard after some very fine weather. Bees wintered well, and have been breeding and gathering pollen for some time, and now the mercury is down nearly to zero. The snow is 4 or 5 inches deep, and still snowing. It seems as though it must work disastrously to bees that are out-doors.

I commenced a year ago last fall with 54 colonies of bees, came through with 45 in the spring, in rather poor condition; I increased them to 56, and obtained about two tons of surplus honey, over 3,000 pounds of it being white honey, which is nearly all sold in my home market. I now sell 10 pounds of honey where I would sell one pound 10 years ago. It takes patience and perseverance to build up such a market as

I have, in a town of not over 500 inhabitants.

I have kept bees after the improved methods for 14 years, and have been very successful. I like the business, and I like the BEE JOURNAL to go along with it. I missed the old editor when he gave up the BEE JOURNAL, but I am getting reconciled to the new one, and am proud of the JOURNAL under his management. I like the stand the editor takes on the adulteration question. We must fight the very appearance of evil!

B. W. PECK.

Richmond Centre, Ohio, March 27.

### The Season of 1893.

This has been a fair winter here for wintering bees. Last spring I started in with 45 colonies, and secured 5,600 pounds of extracted honey of fine quality, part white clover, and the balance basswood. This brought me \$400. Then I divided the colonies up to 76, and have 72 left now.

My bees had 35 acres of white clover to work on, and from which I threshed 94 bushels of seed, which sold for nearly \$800, or \$8.25 per bushel. I attend to the bees alone, sometimes 150 colonies all in chaff hives, and work a farm of 136 acres, and have found by experience that farming and bee-keeping pay well together with the help of one man a few months.

I forgot to state that from one colony I extracted, during the honey-flow, from the upper story alone, 375 pounds, and many others 350. I sold about 1,000 pounds at retail by peddling it out in 2-quart cans, which brought me about 10 cents per pound. I am trying to work up a trade so as to sell, from one year to another, all my honey at home.

NATHAN MERCER.

Neosho, Wis., March 31.

### Wintering Nicely—The Weather.

I have been looking over my bees a little the past two weeks, as the weather was beautiful the forepart of this month, and I found them all doing nicely. I put in outside cases on them on Oct. 16th to the 19th—37 colonies—and packed them in chaff with Hill's device and cushions. I left them on the summer stands. Bees in this locality are coming through all right, as far as I have made inquiry up to this date (March 30th), on this the 43rd degree of latitude.

I had 37 colonies last year, and lost some 14 colonies, and those that did not die were very weak.

The temperature was very even the past winter for Michigan, the average for January being 26 degrees above zero. The coldest day that month was the 8th—it was 10 degrees above zero; the warmest day the 18th, 44 degrees; on the 29th, 11 degrees, while at Chicago it was 9 degrees below zero.

For February the warmest day was on the 19th, 34 degrees; the coldest day was on the 24th, 12 degrees below zero. There was not much snow in January and February.

March has averaged 32 degrees; the warmest was on the 18th, when it was 54 degrees; on the 20th it commenced to get cold, and the mercury went down to 36 degrees, and down, down, until the 29th it was to 10 degrees.

I take the temperature at sunrise, and direction of the wind, rain and snow every day in the year. Any one wishing to know the temperature of the weather, I can tell them what kind of a day we had here. If those writing for the BEE JOURNAL, and giving the temperature, would tell the time in the day such was taken, we could compare the temperature, for it might be 40 degrees at sunrise (the proper time), and at noon of the same day 75 degrees.

JACOB MOORE.

Ionia, Mich., March 31.

### Old Bees in Winter—Longevity.

Bees seem to have wintered finely up to date, but the "dead line" is not yet crossed here in Vermont. Bees had a good flight yesterday. I have 36 colonies on the summer stands.

It made me feel just a bit blue when I read in the BEE JOURNAL from time to time what is said about old bees for winter. I think it will be a test case with me whether old bees are as good for winter as young ones, for mine were all old bees that went into winter quarters. There was not enough honey gathered by bees in this locality to keep up brood-rearing after the middle of last July, consequently there were no young bees that went into winter quarters in the fall of 1894. I will report the result to the BEE JOURNAL in May.

I have read with interest the articles on longevity of bees, which have been published in the BEE JOURNAL. I have never dared to talk any such thing before, as I had never (until recently) seen anything written in the bee-papers about it. I have for a long time thought that there must be a difference in the length of the life of bees, having had things come under my observation which made me feel certain that that must be the case. I think that some of our big guns, and especially queen-breeders, should study this matter a little.

J. F. MERRILL.

Corinth, Vt., March 20.

### Some Things to "Tell."

FRIEND YORK:—Tell J. S., of West Virginia, that on the river in Montgomery county ought to be good for honey, and Hot Springs is a good market.

Tell Mrs. Atchley that I have a 5-year-old queen whose bees are a fourth ahead of any bees that I ever saw in producing honey. They are 4-banded, and are "almost as gentle as flies." I often go to this colony bareheaded, with sleeves rolled up, and taken out frame after frame and exhibit the bees and queen to timid visitors, without any smoke or anything to control them. I have 5-banded queens that I am satisfied



are as good as this one, but I never give my breeders a good show at honey-producing.

I have been in the bee-business 35 years, and my experience is, that, as a rule, the stronger a colony gets, the more vicious the bees are, and of course the strong colonies get the most honey. Certainly I am opposed to "fighting bees," and about the only use I have for a smoker is when some one wants me to transfer bees from box-hives.

Please tell Mr. Norton, that he may not be a good judge of Southern queens, for he made one mistake on page 403. Mismatched 5-banded queens always produce some blacks. If Punic bees from hot Africa are hardy at the North, why not bees from Italy, or any other place? I have had queens from Maine, Michigan and Florida, and many other places, and believe that there is no difference. I call on Mr. Doolittle as a witness, that 5-banded bees are not altogether produced by Southern breeders.

F. C. MORROW.

Wallaceburg, Ark.

### Bee-Keeping in Tennessee.

It seemed the first of March as if winter had broken; the weather continued warm until March 24th. Peach-trees bloomed out nicely, and apple-trees were very nearly in full bloom on the 25th, when it began to turn cold. On the 26th the mercury was at 20 degrees above zero; on the 27th, at 16 degrees above; this killed everything that was green. Everything is cut off, and thrown back three or four weeks.

Light colonies of bees got the full benefit of the peach-bloom, and had begun work on the apple-bloom when the freeze came. There was a good honey-flow from peach and apple bloom for about two weeks; bees had begun to build comb very rapidly—I never saw bees work with as much energy in the spring of the year, as they did this spring, until the cold wave shut them off.

The prospect looks dark now, still I have hopes of a good honey-flow yet this year. Bees wintered finely the past winter, there being but little loss to bee-keepers in this part of the country. I put 31 colonies into winter quarters last fall, and 29 of them came through in good condition, being a loss of only two colonies.

This March was the warmest known here for several years, and turned out to be the coldest for several years. If it had continued warm, bees would have begun to swarm from the middle to the last of this month, but as it is, there will hardly be any swarms until May.

I receive the "old reliable" AMERICAN BEE JOURNAL every Saturday. I take good care of every copy, and bind them all into books. I have a place to keep them, and have the first that I received as a sample copy. I could not do well without it, by any means. I asked one of my neighbors, a beginner, to subscribe for the BEE JOURNAL. His reply was he didn't need it; that the nature of the bees was enough for him.

I think that the man who keeps bees should read bee-papers all the time, and keep posted.

A. C. BABB.

Greenville, Tenn., April 2.

### Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 24.—The honey market will be very quiet for the balance of the season. We will not do much business until new honey comes in. We cannot quote prices but will obtain the best possible price on what little stock we will sell until early fall. Beeswax is very active at 25@26c. J. A. L.

ALBANY, N. Y., Mar. 23.—The honey market is very slow now. The demand is about over on comb. Some extracted wanted at 6c.; if dark color, 5c. Beeswax, 26@27c. H. R. W.

CHICAGO, ILL., Mar. 15.—There has been a good deal of comb honey sold in the last few days, so that our stock of the best grades is now reduced. We obtain 14@15c. for choice white. Dark is hard to move at 10@12c. Extracted is very quiet, selling at from 4@7c. Beeswax is in good demand at 23@25c. R. A. B. & Co.

CINCINNATI, O., Mar. 20.—Trade is dull. Prices of honey are nominal. We quote 4@8c. for extracted, and 12@15c. for choice white comb. Beeswax is in fair demand, at 20@25c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., Apr. 6.—We have had an exceedingly slow trade on honey this season, and prices ruled comparatively low. We quote to-day: No. 1 white comb, 1-lb., 14@15c.; No. 2, 13@14c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, 5@7c. Beeswax, 20@22c. C.-M. C. Co.

### List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

#### Chicago, Ills.

J. A. LAMON, 44 and 46 So. Water St.  
R. A. BURNETT & Co., 161 South Water Street

#### New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.  
HILDRETH BROS. & SEGELKEN,  
28 & 30 West Broadway.  
CHAS. ISRAEL & BROS., 110 Hudson St.

#### Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.  
CLEMOMS-MASON COM. Co., 521 Walnut St.

#### Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

#### Hamilton, Ills.

CHAS. DADANT & SON.

#### Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

**One-Cent Postage Stamps** we prefer whenever it is necessary to send stamps for fractions of a dollar. By remembering this, you will greatly oblige us.